

## PCT

INTERNATIONAL SEARCH REPORT  
(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 12989-9	<b>FOR FURTHER ACTION</b>	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/CA2004/001503	International filing date (day/month/year) 20 August 2004 (20-08-2004)	(Earliest) Priority date (day/month/year) 20 August 2003 (20-08-2003)
Applicant CASHMAN, NEIL		
This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.		
This international search report consists of a total of <u>8</u> sheets.  <input checked="" type="checkbox"/> It is also accompanied by a copy of each prior art document cited in this report.		
<b>1. Basis of the report</b>  a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  <input type="checkbox"/> the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).  b. <input type="checkbox"/> With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.  <b>2.</b> <input type="checkbox"/> Certain claims were found unsearchable (See Box II).  <b>3.</b> <input type="checkbox"/> Unity of invention is lacking (See Box III).  <b>4.</b> With regard to the title.  <input type="checkbox"/> the text is approved as submitted by the applicant.  <input checked="" type="checkbox"/> the text has been established by this Authority to read as follows :  The submitted title does not comply with rule 4.3 of the <i>Regulations Under the PCT</i> . The following should be used: <b>Epitope protection assay and method for detecting protein conformations</b>  <b>5.</b> With regard to the abstract.  <input checked="" type="checkbox"/> the text is approved as submitted by the applicant.  <input type="checkbox"/> the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.  <b>6.</b> With regard to the drawings,  a. The figure of the drawings to be published with the abstract is Figure No. <b>1</b>  <input checked="" type="checkbox"/> as suggested by the applicant.  <input type="checkbox"/> As selected by this authority, because the applicant failed to suggest a figure.  <input type="checkbox"/> As selected by this Authority, because this figure better characterizes the invention.  b. <input type="checkbox"/> None of the figures is to be published with the abstract.		

Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:
  - a. type of material
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing
    - ☐ contained in the international application as filed
    - ☐ filed together with the international application in computer readable form
    - ☐ furnished subsequently to this Authority for the purposes of search
2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional comments:

**Box No. II**      **Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons :

- 1    ☐    Claims Nos. :  
         because they relate to subject matter not required to be searched by this Authority; namely:
  
- 2    ☐    Claims Nos.:  
         because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically :
  
- 3    ☐    Claims Nos. :  
         because they are dependant claims and are not drafted in accordance with the second and third sentences of Rule

**Box III**      **Observation where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows :

- 1    ☐    As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
- 2    ☐    As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
- 3    ☐    As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos. :
  
- 4    ☐    No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos. :

**Remark on Protest**      ☐      The additional search fees were accompanied by the applicant's protest.  
                                 ☐      No protest accompanied the payment of additional search fees.

Box IV

Text of the abstract (Continuation of item 5 of first sheet)

## A. CLASSIFICATION OF SUBJECT MATTER

According to the International Patent Classification (IPC)  
G01N 33/68, G01N 33/53, and G01N 33/569

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

**G01N 33**

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Google and MSN Recherche

Electronic data base consulted during the international search (name of data base, and, where practicable, search terms used)

Pubmed, Derwent (from Delphion)

epitope\*, épitope\* (French), marqueur antigénique\* (French), protect\*, block\*, detect\*, denatur\*, disaggregat\*, conformat\*, assay, prion, prion disease\*, PrPsc, PrPc, succinic anhydride, diethyl pyrocarbonate, peroxyinitrite

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6406864 B2 (The Regent of the Univ. of California) 18 June 2002 Refer to col. 3-4, 12-16, example 6, and claim 8	1-8, 10-39
Y, P	CA 2452946 A1 (Ortho-clinical diagnostics, inc.) 19 June 2004 Refer to claim 4	31-38
Y	CA 2408762 A1 (Aventis behring GMBH) 19 April 2003 Refer to pages 2-8 and claim 6	1-8, 10-30, 39

Further documents are listed in the continuation of Box C.

Patent family members are listed in annex.

\* Special categories of cited documents :  
 "A" document defining the general state of the art which is not considered to be of particular relevance  
 "E" earlier application or patent but published on or after the international filing date  
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  
 "O" document referring to an oral disclosure, use, exhibition or other means  
 "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  
 "&" document member of the same patent family

Date of the actual completion of the international-type search

7 December 2004 (7-12-2004)

Date of mailing of the international-type search report

24 December 2004 (24-12-2004)

Name and mailing address of the ISA/  
 Commissioner of Patents  
 Canadian Patent Office - PCT  
 Ottawa/Gatineau K1A 0C9  
 Facsimile No. 1-819-953-9358

Authorized officer

David Boudreau  
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## C. (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Bolton et al. (Jul 1991). Molecular Location of a species-specific epitope on the hamster scrapie agent protein. <i>J of Virology</i> . <b>65</b> (7): 3667-3675. Refer to page 3668, 1 <sup>st</sup> two paragraphs; and page 3671, subsection: Chemical modification of the epitope	1-30, 39
A	Safar et al. (November 2002). Measuring prions causing bovine spongiform encephalopathy or chronic wasting disease by immunoassays and transgenic mice. <i>Nat Biotechnol</i> . <b>20</b> (11): 1147-1150. Refer to the whole document	1-8, 10-30, 39
A	Paramithiotis et al. (Jul 2003). A prion protein epitope selective for the pathologically misfolded conformation. <i>Nat Med</i> . <b>9</b> (7): 893-899. Refer to page 893, 2 <sup>nd</sup> col.; page 894, 1 <sup>st</sup> col.; page 895; and methods.	1-8, 15-28
A	Goldberg M. (April 2003). Le prion: un agent pathogène encore mystérieux. Extrait de <i>La Lettre de l'Institut Pasteur</i> . <b>41</b> : 1-10. Refer to page 5, subsection: "Améliorer la sensibilité des tests de détections"	1-39
A	Guilbert C. (April 2001). La dynamique du prion. <i>Biofutur, Hors Série avril 2001</i> : 30-32. Refer to the whole document for background on prion	1-39
A, E	Soto C. (October 2004). Diagnosing prion diseases: needs, challenges and hopes. <i>Nature Rev Microbiol</i> . <b>2</b> (10): 809-819. Refer to the whole document for background on prion detection methods	1-39

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
PCT/CA2004/001503

Document cited	Publication date	Family member (s)	Publication date
US6406864	18-06-2002	AU761710 B2	05-06-2003
		AU765939 B2	02-10-2003
		AU2585499 A	06-09-1999
		AU6413799 A	01-05-2000
		BR9914373 A	07-08-2001
		CA2318473 A1	26-08-1999
		CA2344853 A1	20-04-2000
		DE1071716 T1	25-10-2001
		DE1119773 T1	25-10-2001
		EP1071716 A1	31-01-2001
		EP1119773 A1	01-08-2001
		JP2002504495 T	12-02-2002
		JP2002527082 T	27-08-2002
		NZ510703 A	25-10-2002
		US5977324 A	02-11-1999
		US6214565 B1	10-04-2001
		US6406864 B2	18-06-2002
		US6677125 B2	13-01-2004
		US2004137529 A1	15-07-2004
		WO0022438 A1	20-04-2000
		WO9942487 A1	26-08-1999
CA2452946	19-06-2004	CA2452946 A1	19-06-2004
		CA2457651 A1	10-08-2004
		EP1435521 A1	07-07-2004
		EP1445615 A1	11-08-2004
		JP2004198432 A	15-07-2004
		US2004180367 A1	16-09-2004
CA2408762	19-04-2003	CA2408762 A1	19-04-2003
		DE10152677 A1	08-05-2003
		EP1304336 A2	23-04-2003
		IL152332D D0	29-05-2003
		JP2003206300 A	22-07-2003
		US2003092094 A1	15-05-2003

